

REMARKS

Upon entry of this Amendment, claims 1, 2 and 4-30 are all the claims pending in the application. Claims 19-30 have been added and claim 3 has been canceled. Claims 7-18 are withdrawn from consideration as being drawn to a non-elected invention. Claims 1-6 presently stand rejected.

The Examiner has not indicated approval of the drawings filed with the application on February 14, 2001. Accordingly, Applicant requests approval of these drawings from the Examiner in the next office action.

Additionally, the Examiner has not returned the initialed PTO/SB/08 filed with the Information Disclosure on March 31, 2003. Applicant also requests the initialed PTO/SB/08 from the Examiner in the next office action.

In regard to the claims, claims 1-6 stand rejected for the first time under 35 U.S.C. §112, second paragraph, claims 1-4 and 6 are again rejected under 35 U.S.C. §102(b) as being anticipated by Ishihara (USP 5,946,100) and claim 5 is again rejected under 35 U.S.C. §103(a) as being unpatentable over Shinohara et al. (USP 6,231,200) in view of Ishihara.

Applicants have amended independent claims 1, 5 and 6 to include an anti-reflective layer which was the subject matter of canceled claim 3. The claimed anti-reflective layer is formed on a surface of a light shield layer. Further, the claims have been amended to require that collimated light is launched into a plurality of microlenses and diffused light is issued from a plurality of light exit areas.

For the reasons set forth below, Applicant respectfully traverses the rejections and requests favorable disposition of the Application.

§112 Rejection

In regard to the final rejection of claims 1-6 under 35 U.S.C. §112, second paragraph as well as Examiner's response to Applicant's argument, from the Request for Reconsideration filed August 25, 2003, that " θ_{\min} should be θ_{\max} ", Applicant respectfully reminds the Examiner that the Applicant was referring to the Examiner's hand-written "derivation" and not the specification of the application at hand. Accordingly, no "proof" of the recited formula is deemed necessary. Regardless, Applicant submits that the condition applies due to Snell's Law. For at least this reason, Applicant submits that the §112 rejection of claims 1-6 is obviated and should be withdrawn. Withdrawal on the record is kindly requested.

Prior Art Rejections

In regard to the prior art rejections of claims 1-6, Applicant submits that the Examiner has failed to set forth a *prima facie* case of anticipation. In particular, it is clear that the Examiner is relying on the principles of inherency with regard to the single prior art reference to Ishihara. This is known since the Examiner has not even attempted to show where within the asserted prior art reference the requirements of the equation recited in claims 1, 5 and 6 are shown. Instead, the Examiner has merely asserted that the recited equation "is satisfied" by the structure disclosed in Ishihara. To support the assertion, the Examiner provided a hand-drawn figure and a hand-written "derivation" of the recited equation required by the claims.

However, the Examiner has failed to provide any explanation whatsoever regarding how the alleged derivation applies to the asserted prior art reference. In other words, the Examiner has not demonstrated that the allegedly derived equation is an absolute consequence of the structure disclosed in Ishihara. As is well settled, when an Examiner relies on a theory of inherency, “the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art.” *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Int. 1990). Inherency may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.” *Ex parte Skinner*, 2 USPQ2d 1788, 1789 (Bd. Pat. App. & Int. 1986). Here, the Examiner has failed to provide any such reasoning and, thus, the Examiner has not met his/her burden of establishing a *prima facie* case of anticipation. Moreover, the Examiner merely asserts that his/her “derivation” is born out of the “principle of the geometric optics”. However, the Examiner has not provided any support at all for the derivation. In effect, the geometries used by the Examiner to purportedly derive the equation of claim 1 do not apply to the geometries of the optical elements in Ishihara. To the extent the Examiner relies on Figs. 6 and 7 of Ishihara, Applicant respectfully requests that the Examiner demonstrate where the variables t , R and θ apply to the optical elements disclosed. Absent such a conclusive showing, the anticipation rejection is not supported and is, thus, improper.

In regard to the rejection of claim 5, because claim 5 recites the same equation as recited in claims 1-4 and 6 and, for the same reason as set forth above, the rejection of claim 5 over the combination of Shinohara et al. and Ishihara should be withdrawn as well.

In any event, in order to advance prosecution of the application and without acquiescing in the Examiner's rejections, Applicant has amended independent claims 1, 5 and 6 to further distinguish over the prior art of record. Applicant submits that the prior art of record fails to teach or suggest, either independently or in combination, all the recited requirements of independent claims 1, 5 and 6. For at least this reason, Applicant submits that claims 1-6 are patentable over the prior art of record and withdrawal of the prior art rejections of claims 1-6 is respectfully requested.

Additionally, Applicant provides the following discussion regarding the differences between the invention set forth in the present claims and the disclosures of Ishihara and Shinohara et al.

Specifically, the optical element disclosed in the cited reference of Ishihara has the microlens array 17 (Note: 6 in FIG. 6) in which a large number of microlenses are formed on the top surface of a glass substrate and the pinhole array 19 (Note: 7 in FIG. 6) in which pinholes are formed by photolithography in the light-shielding film vapor deposited over the bottom surface of the glass substrate corresponding to a large number of microlenses. One distinction between the optical element of Ishihara and the light diffusing plate of the claimed invention is that, in the disclosure of the cited reference to Ishihara, although the antireflection film (anti-reflective layer) is provided also on the surface of the microlenses, it is provided between the glass

substrate and the light-shielding film on the surface opposite to the microlenses (the bottom surface) of the glass substrate. Thus, although the pinholes are provided in the light-shielding film, the pinholes are not provided in the anti-reflection film. In comparison, in the light diffusing plate of the claimed invention, the antireflective layer is provided on the surface of the light shield layer formed on another surface of the lens substrate reverse to the plurality of microlenses and neither the anti-reflective layer nor the light shield layer is provided on the light exit areas.

A further distinction is that in the optical element comprising the microlens array 17 and the pinhole array 19 disclosed in the cited reference of Ishihara, the direction that light passes through is bi-directional. That is, the light from the light source enters from microlens array 17 (See FIG. 5) and is emitted from the pinhole array 19, and the reflected light from object 0 enters from pinhole array 19 and is emitted from the microlens array 17. In comparison, in the light diffusing plate of the claimed invention, collimating light is launched to the microlenses and diffusing light is issued from the light exit areas and thus the light that passes into the light-diffusing plate is uni-directional.

Accordingly, it is clear from the present application that the image display having a high contrast over a wide range of viewing angles will be achieved by reducing the reflection of external light and avoiding contrast deterioration caused by mirroring external light and the like since the anti-reflective layer is formed on the viewing side, see, for example page 19, lines 4-8 of the specification. This is clearly different than the optical element disclosed in the cited reference of Ishihara.

Patentability of New Claims

For additional claim coverage merited by the scope of the invention, Applicant has added new claims 19-30. Applicant submits that the prior art does not disclose, teach, or otherwise suggest the combination of features contained therein.

Specifically, claim 21 is added to particularly define a backlight section which comprises a collimating plate comprising the diffuse reflecting layer. As disclosed in the present application, the collimating plate and the light diffusing plate are separately used where appropriate since those two plates are different in function. In particular, the collimating plate used for backlight is provided with the diffuse reflecting layer, not the anti-reflective layer, and its function of the upper layer on the light shield layer is different from the light diffusing layer. In comparison, the cited reference Ishihara uses only one optical element at the position that bi-directional light passes through.

Claims 19, 20 and independent claim 22, and dependent claims 23-26 have been added directed to the embodiment of FIG. 5 of the present application. Applicant submits that the cited reference to Ishihara does not disclose the configuration as shown in FIG. 5 in regard to the light diffusing plates of the present application in which the end surface of each of the protrusions of the lens substrate becomes each of light exit areas, and the light shield layer and the antireflective layer are embedded among the protrusions.

In particular, new claims 19 and 20 define that the protrusions corresponding to the microlenses are provided on the side of another side of the lens substrate, the end surface of each of the protrusions becomes each of light exit areas, and the light shield layer and the anti-

reflective layer are embedded among the protrusions. New independent claim 22 and its dependent claims 23-26 define that the protrusions corresponding to the microlenses are provided on the side of another side of lens substrate and the end surface of each of the protrusions becomes each of light exit areas.

New independent claim 27 has been added to provide scope of coverage similar to that of claim 1, but which does not recite the claimed formula of claim 1. Claim 27 is believed patentable at least for the same reason as described above in regard to claim 1. Claim 28 depends from claim 27 and is believed to be patentable at least by virtue of this dependency. New claim 30 is believed to be patentable at least for the same reason as set forth above in regard to claims 19 and 20.

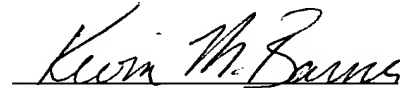
Conclusion

In view of the foregoing remarks, the application is believed to be in form for immediate allowance with claims 1, 2 and 4-30, and such action is hereby solicited. **If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, he is kindly requested to contact the undersigned at the telephone number listed below.**

AMENDMENT UNDER 37 C.F.R. § 1.114(c)
U.S. Appln. No. 09/782,199

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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